

Figure 1: Client behind a Cone NAT/PAT. All requests with a given port (8000) are masqueraded. The next, and subsequent requests made to different destination addresses with that port are masqueraded to the same port. In addition, unsolicited responses from others addresses are forwarded, regardless of source port.

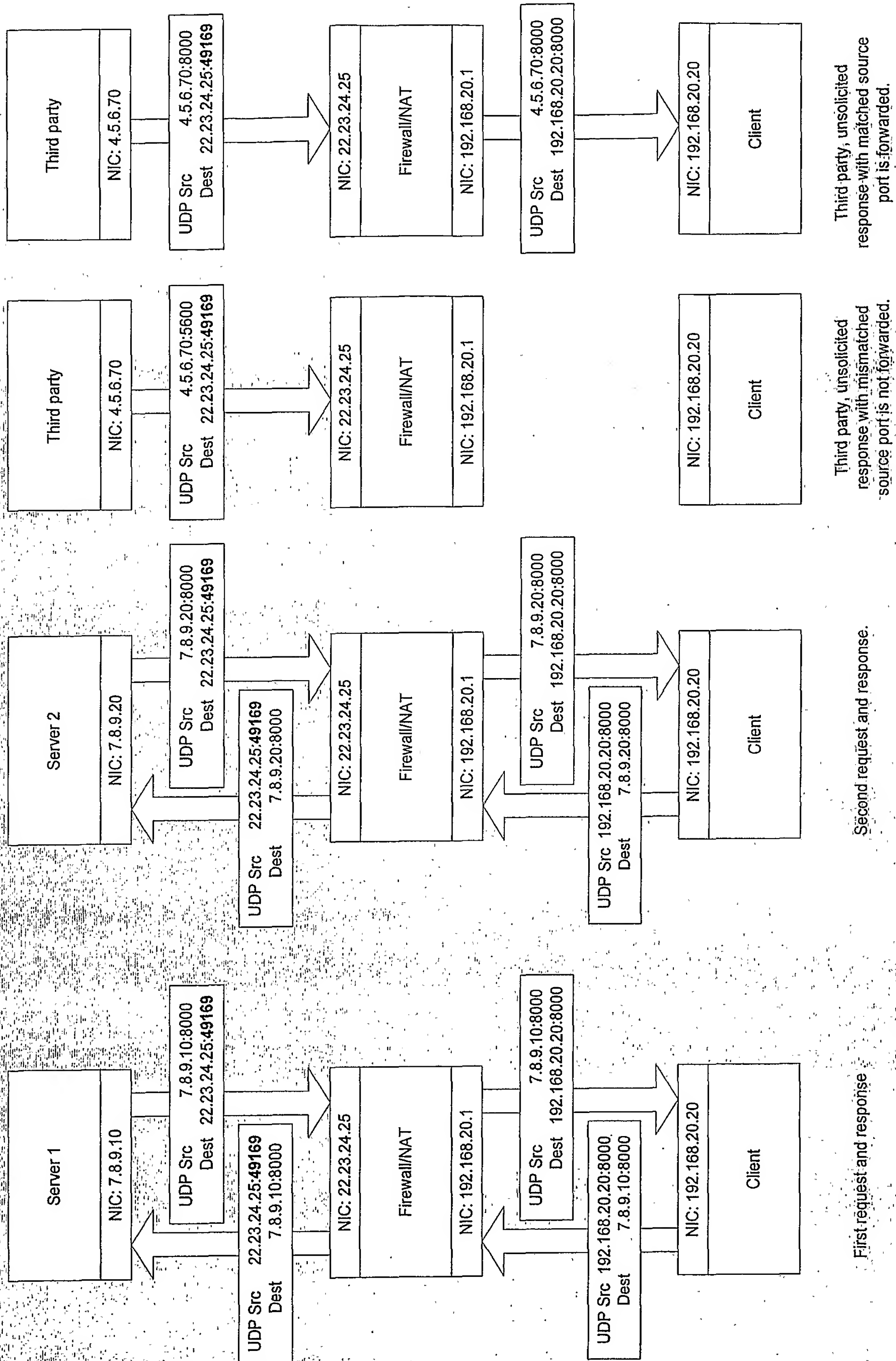


Figure 2: Client behind a Port-Restricted Cone NAT/PAT. All requests with a given port (8000) are masqueraded. The next, and subsequent requests made to different destination addresses with that port are masqueraded to the same port. In addition, unsolicited responses from other addresses are forwarded, so long as the source port matches the destination port of the original request.

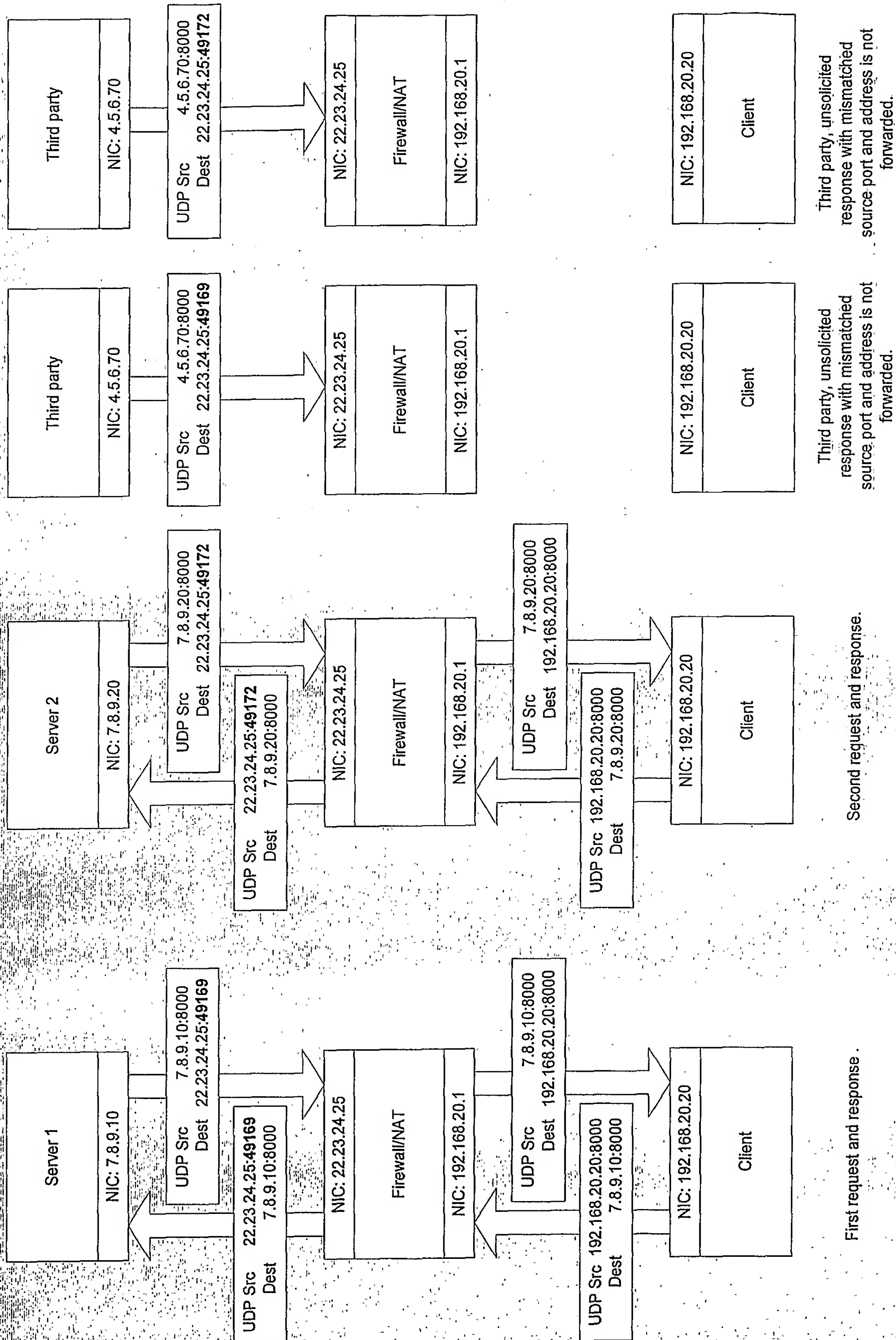


Figure 3: Client behind a Symmetric NAT/PAT. All requests with a given port (8000) are masqueraded. The next, and subsequent requests made to different destination addresses with that port are masqueraded to different ports. In addition, unsolicited responses from others addresses are not forwarded, because the source addresses do not match the destination of the original request. Most symmetric firewalls also require the source port to match the destination port of the original request (full tuple match).

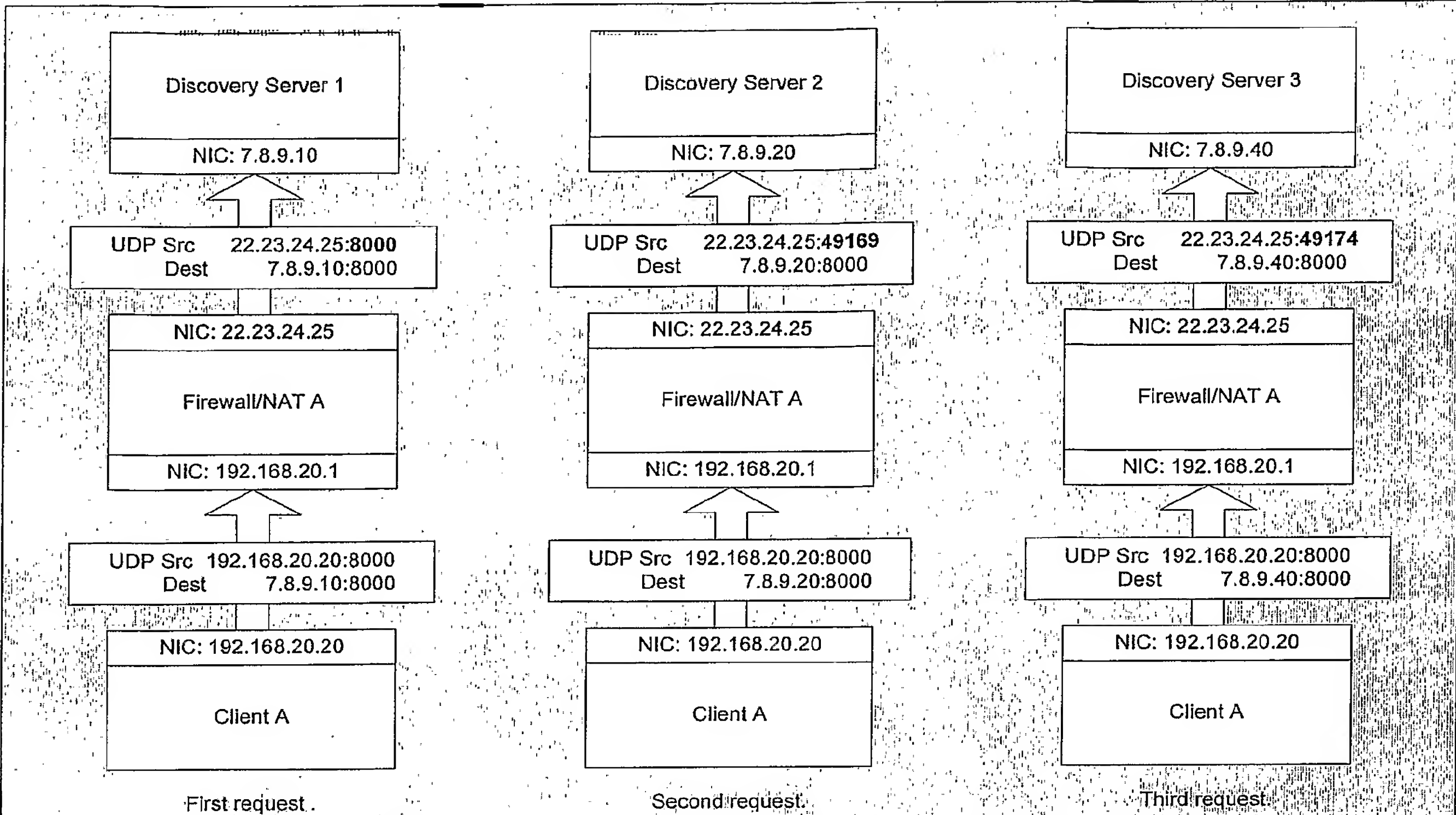


Figure 4a: Client behind a second-priority masquerading NAT/PAT. The first request with a given port (8000) is not masqueraded. The next, and subsequent requests made to different destination addresses with that port before the first one expires are masqueraded.

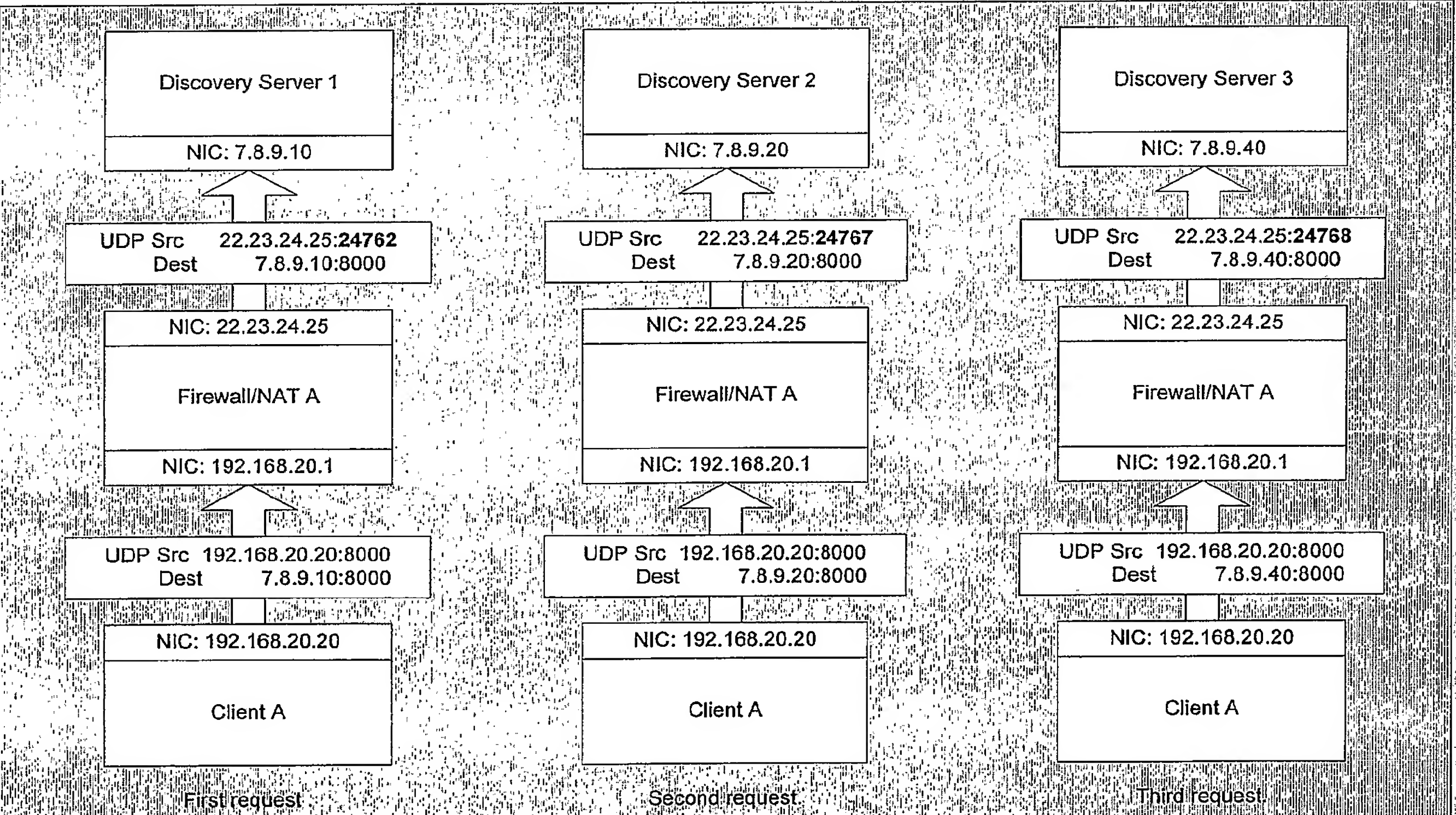


Figure 4b: Client behind a pure masquerading NAT/PAT. All requests with a given port (8000) are masqueraded. The masqueraded port changes for each destination address.

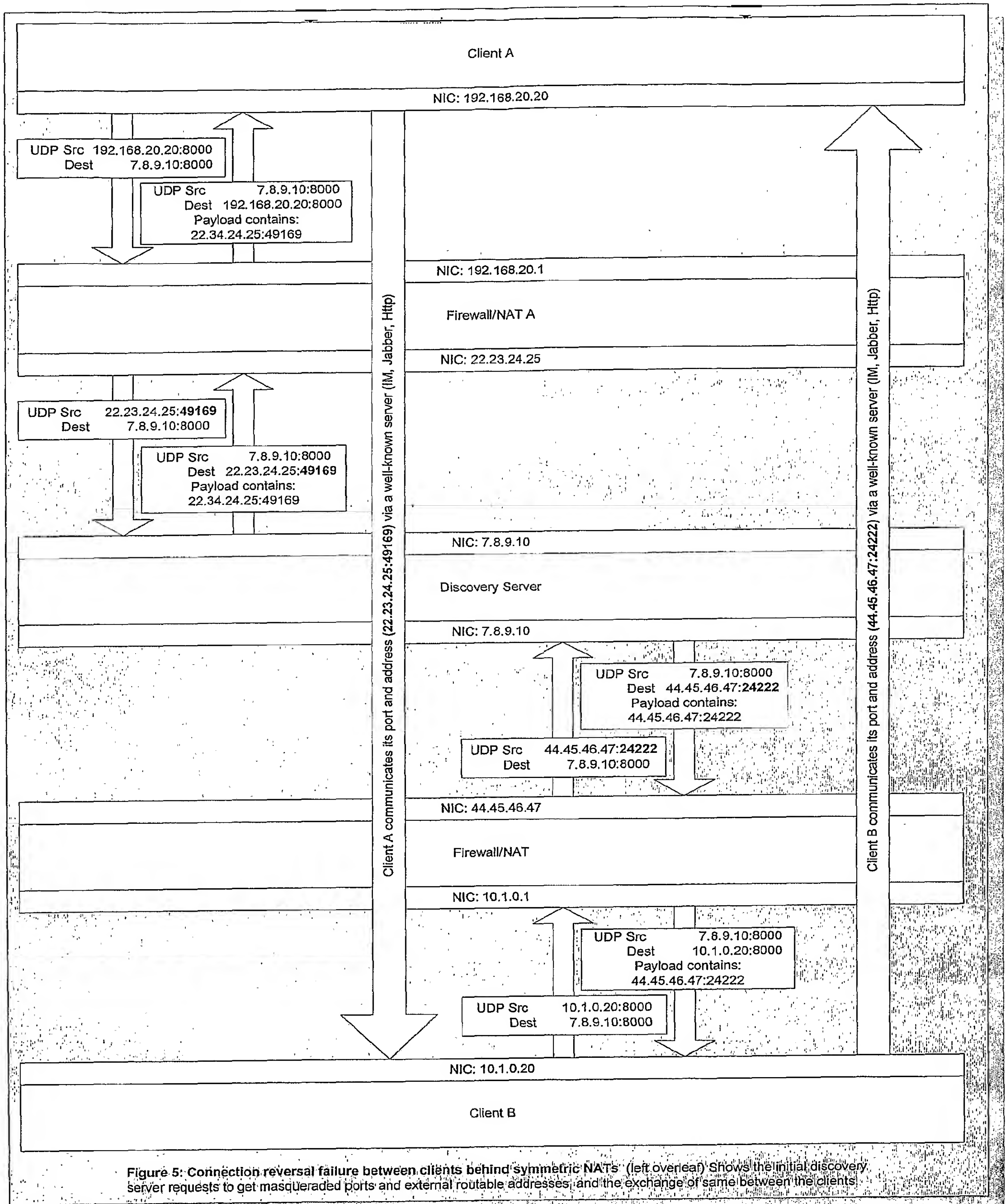


FIGURE 5A

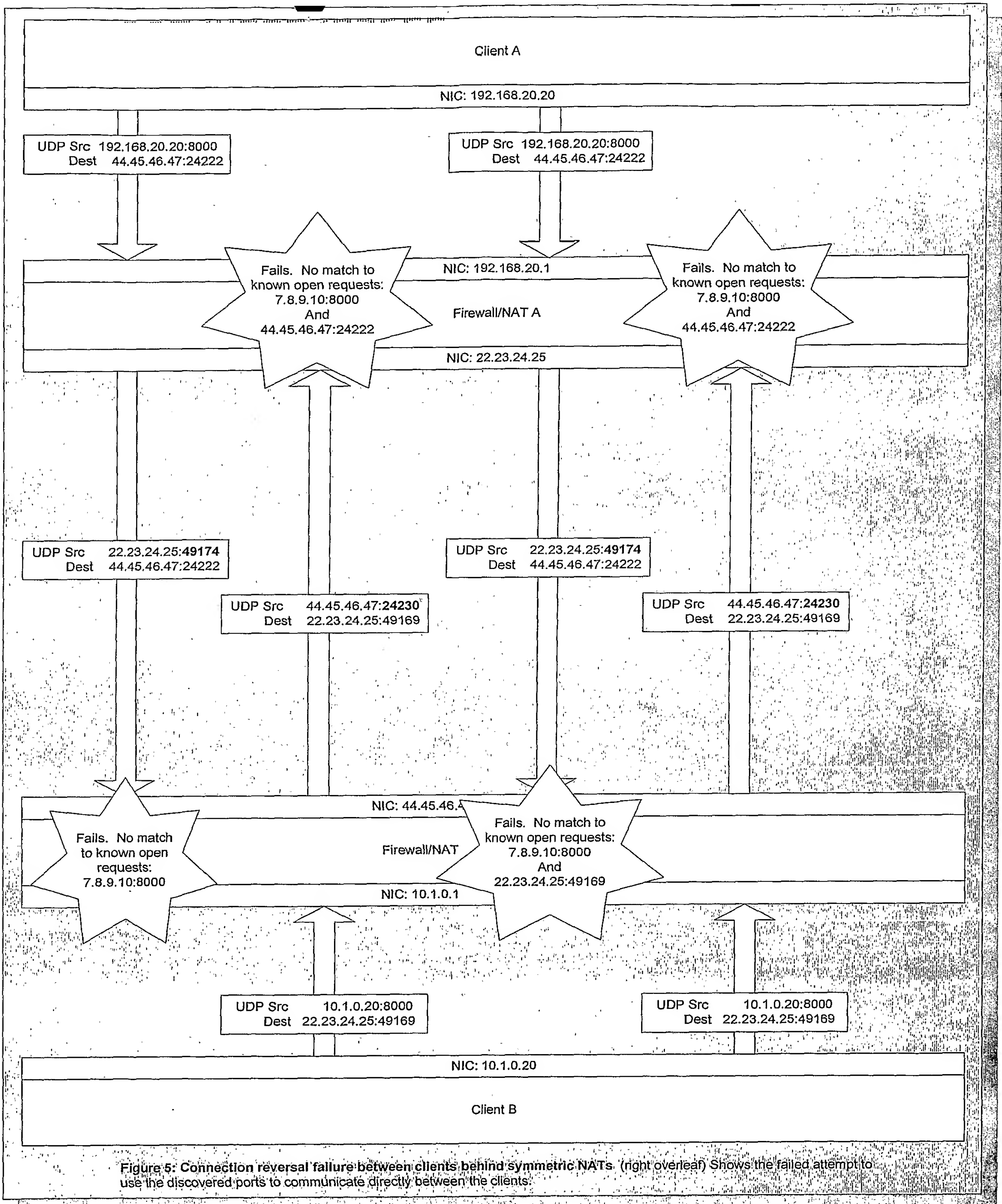
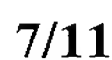


FIGURE 5B



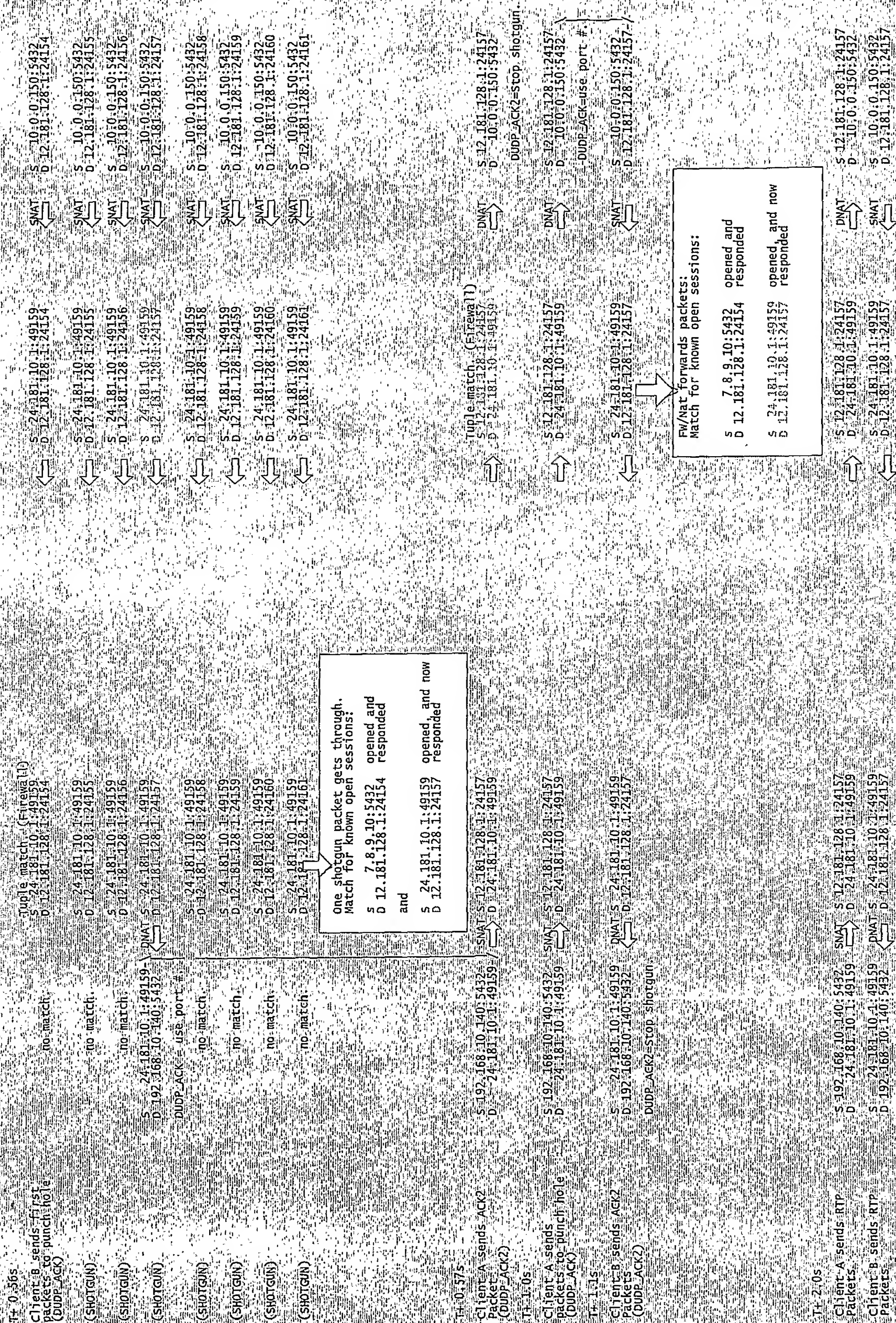


Figure 6: Shotgun Exchange between Client behind Symmetric NAT/PATs, part 2 of 2.

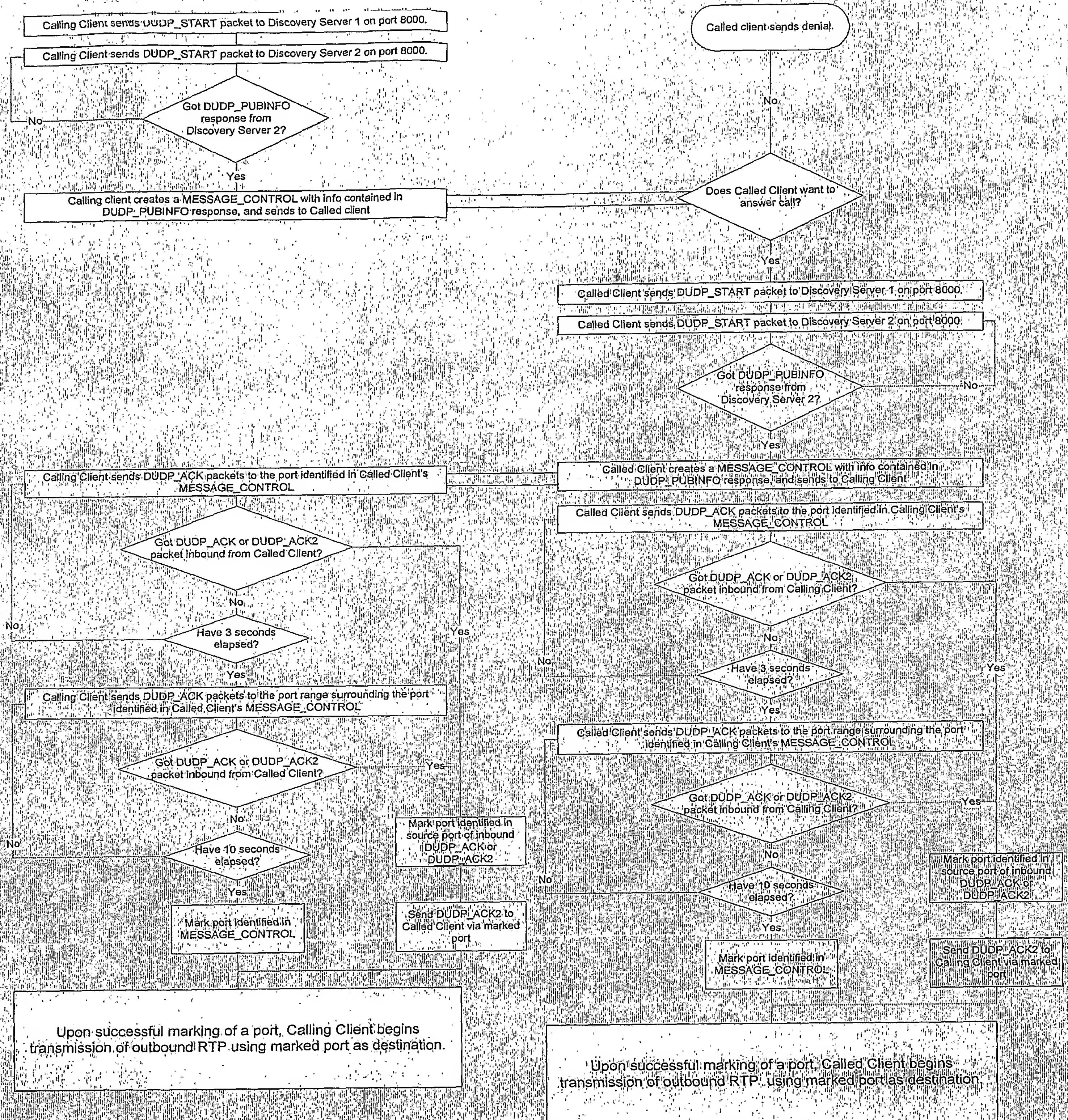


Figure 7: Flowchart of Discovery, Message Exchange, and Shotgun process

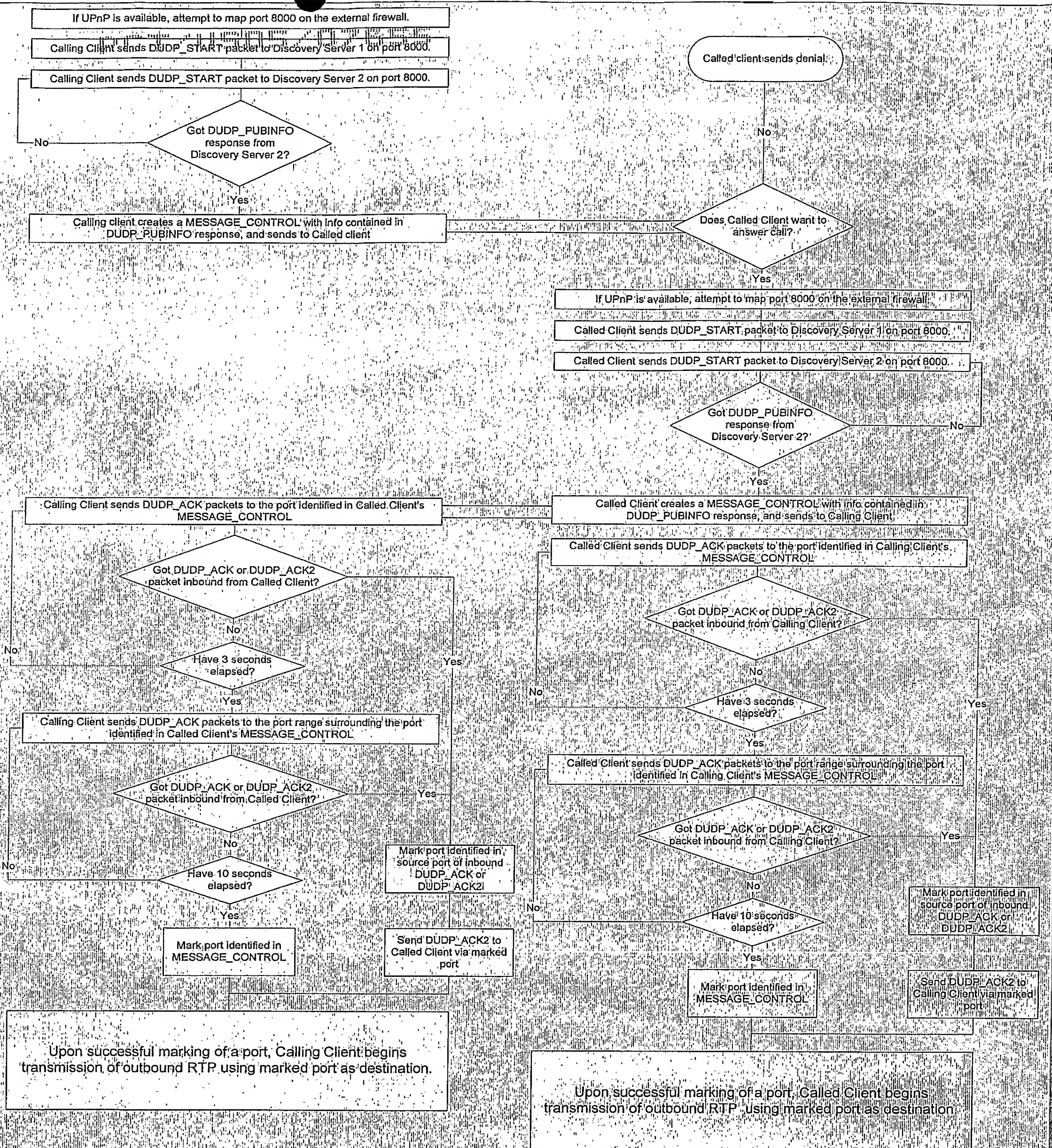


Figure 8: Flowchart of Discovery, Message Exchange, and Shotgun process, including UPnP

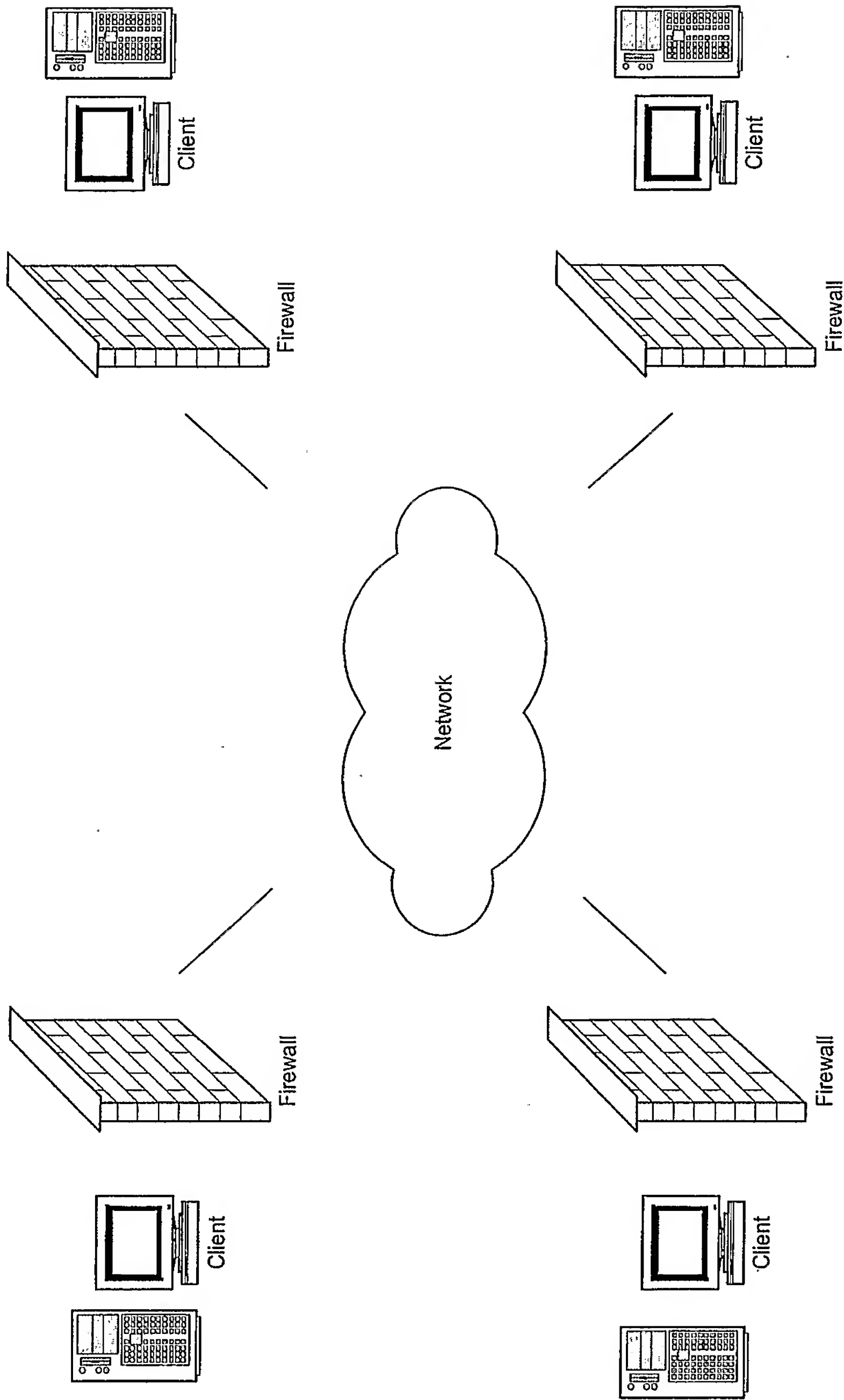


FIGURE 9